

Amendments to the Claims:

1. (Currently Amended): A method comprising:
for routing a data packet comprising a header section and a pay-load section, said header section comprising a compressed header section containing coded information including routing information; ~~and~~ comprising the steps of:

[[-]] receiving a data packet ~~said data packet~~ at an input interface, ~~said data packet~~ comprising a header section and a pay-load section, said header section comprising a compressed header section containing coded information including routing information; decompressing said routing information from said compressed header section; including at least a part of said decompressed routing information into said data packet;

[[-]] routing said data packet to an output interface; and

[[-]] forwarding said data packet to said output interface, wherein said routing step comprises ascertaining said routing information from said compressed header section, and wherein said coded information is left unchanged ~~in~~ by said routing and forwarding steps.

2. (Currently Amended: A method according to claim 1, wherein said ascertaining step comprises a step of reading a first header compression context identifier from said compressed header section.

3. (Currently Amended): A method according to claim 1, wherein said routing step comprises a ~~step of~~ assigning a second header compression context identifier to said data packet and a ~~step of~~ replacing said first header compression context identifier by said second header compression context identifier in said data packet.

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled).
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled).

18. (Currently Amended) A method according to claim 1[[17]], wherein said part of said decompressed header is attached to said data packet in front of said header section, such that said part of said decompressed header can be forwarded before said header section.

19. (Currently Amended) A method according to claim 1 ~~[[17]]~~, comprising, a ~~step of~~ removing at least a part of said decompressed header from said data packet.

20. (Cancelled)

21. (Currently Amended) A method according to claim 2, comprising a ~~step~~ of classifying said data packet according to a service class.

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Currently Amended) A method accord to claim 21, wherein said forwarding ~~step~~ comprises a ~~step of~~ placing said data packet into one of a plurality of queues, the chosen queue corresponding to a value of said classification code point.

27. (Cancelled)

28. (Currently Amended) A method according to claim 1, wherein said forwarding ~~step~~ comprises radio or microwave transmission of said data packet.

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Currently Amended) An apparatus decompressor device, comprising an input interface configured adapted to receive at least one data packet containing compressed data, a decompressor configured to communicate de-compressing-means ~~communicating~~ with said input interface and adapted to decompress said compressed data such that decompressed data are created based on said compressed data, and an output interface configured to communicate ~~communicating~~ with said decompressor decompressing-means and adapted to provide said decompressed data of said data packet, wherein said decompressor decompressing-means is configured adapted to selectively decompress only compressed header data contained in a header section of said data packet, wherein the decompressor is configured to decompress said routing information from said compressed header information and to include at least a part of said decompressed routing information into said data packet.

34. (Currently Amended) An apparatus decompressor device according to claim 33, wherein said decompressor decompressing-means has is configured to access to a header compression context table and is adapted to decompress said compressed data using at least one of data contained in at least one predetermined section of said header compression context table, and/or using at least one predetermined mathematical decompression rule.

35. (Currently Amended) An apparatus decompressor device according to claim 33, wherein said decompressor decompressing-means is adapted to decompress from said compressed header section an identifier of an external network node that is the destination of said data packet.

36. (Currently Amended) An apparatus decompressor device according to claim 35, wherein said decompressor decompressing means is adapted to decompress only said identifier of said network node that is the destination of said data packet.

37. (Currently Amended) An apparatus decompressor device according to claim 33, wherein said decompressor decompressing means is adapted to decompress said complete compressed header section of said data packet.

38. (Currently Amended) An apparatus decompressor device according to claim 33, wherein said decompressor decompressing means is adapted to decompress a service classification code element from said compressed header section.

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Currently Amended) An apparatus router device for routing at least one data packet with a compressed header section, comprising at least one input port adapted to receive said at least one data packet through at least one first communication link, and a plurality of output ports, wherein said input port comprises a reading unit reader adapted to read a first header compression context identifier from said a compressed header section, and a switcher switching unit adapted to replace said first header

compression context identifier by a second header compression identifier, wherein the apparatus is configured to decompress routing information from said compressed header section, and to include at least a part of said decompressed routing information into said data packet.

45. (Currently Amended) An apparatus ~~router device~~ according to claim 44, wherein said ~~switcher switching unit is configured to~~ communicate[[s]] with a switching table assigning to said first header compression context identifier said second header compression context identifier and at least one output port identifier.

46. (Currently Amended) An apparatus ~~router device~~ according to claim 45, further comprising a ~~controller unit~~ communicating with said ~~reader reading unit~~ and said switching table, and adapted to detect a new first header compression context identifier received at said ~~reader reading unit~~, to assign a new second header compression context identifier and an output port identifier to said first header compression context identifier, and to create at least one entry in said switching table for said identifiers, one entry for each assignment of an output port.

47. (Currently Amended) An apparatus ~~router device~~ according to claim 46, wherein said ~~controller unit~~ is additionally adapted to erase said entry in said switching table given a predetermined condition.

48. (Cancelled)

49. (Cancelled)

50. (Cancelled)

51. (New) An apparatus according to claim 33, wherein the apparatus comprises a decompressor device.

52. (New) An apparatus according to claim 44, wherein the apparatus comprises a router device.